DOCUMENT RESUME

ED 458 817 FL 026 973

AUTHOR Gonzalez-Bueno, Manuela; Perez, Luisa
TITLE Electronic Mail in Foreign Language Learning Revisited.
PUB DATE 2001-03-00
NOTE 26p.; Paper presented at the Annual Meeting of Teachers of English to Speakers of Other Languages (TESOL) (St. Louis, MO, February 27-March 3, 2001).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Computer Mediated Communication; Computer Uses in Education; *Dialog Journals; *Electronic Mail; Elementary Secondary Education; Second Language Instruction; Second Language Learning; *Spanish; Student Participation; *Writing Skills; Written Language

ABSTRACT

The interest in the effects of computer-mediated communication on language learning has increased in recent years. It is asserted by proponents that use of e-mail in second language learning promotes more effective discourse management, the use of more foreign language functions, and greater levels of student participation. E-mail puts learners in a position of greater control over their own learning because they determine the quality, level, and amount of participation--all of which is conducive to enhanced language acquisition. This study explores the significance of the overall effect of using e-mail in the quantity and accuracy of Spanish written language generated by e-mail dialogue journals compared to the paper-and-pencil version of the technique. The study also compared the first message with the last message in the course. It was found that neither the e-mail group nor the pen-and-pencil group improved accuracy or vocabulary use more than the other. Therefore, there is no evidence that use of e-mail over the more traditional pen-and-pencil technique has any advantages in terms of student performance. An appendix is attached with excerpts from students responses. (Contains 16 references.) (KFT)

Reproductions supplied by EDRS are the best that can be made
from the original document.

FL

Electronic Mail in Foreign Language Learning Revisited

Manuela González-Bueno, University of Kansas

Luisa Pérez, Emporia State University

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Manuela González-Bueno

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Introduction

The interest in the effects of computer mediated communication (CMC) on language learning has increased in recent years and consequently, has been the focus of more and more foreign language studies. Specific features of the language generated via CMC have been described as promoting more effective discourse management, the use of more language functions, and greater levels of participation (González-Bueno, 1998; St. John and Cash, 1995; Van Handle and Corl, 1998; Wang, 1994). The electronic medium reportedly allows for a non-threatening interaction (Beauvois, 1996) and easy manipulation of the text while editing, which, in turn, translates into increased ease in the writing process.

Using electronic mail to communicate in a foreign language seems to put learners in a position of greater control over their own learning since they can determine the level, quality, and amount of participation (Roche-Dolan, 1999). In addition, Beauvois (1998) asserted that "reading vast amounts of input from classmates and from the instructor also contributes to more contact with the target language than is possible in the traditional classroom" (p. 108).

These aspects of CMC seem to be conducive to enhanced language acquisition. According to Blake (2000),

> computer mediated communication can provide many of the alleged benefits ascribed to the Interaction Hypothesis, but with greatly increased possibilities for access outside of the classroom environment. If negotiations are important for SLA process [...], then networked negotiations provide a medium for this fruitful activity to occur not only more frequently but also at any time of the day or night. (p. 132)

ED 458 817

FL 026973

BEST COPY AVAILABLE

Similarly, as the National Educational Technology Standards for Students (ISTE 2000a) points out, "Today's students communicate instantly through e-mail and receive prompt feedback on how well their messages are understood" (p. 76).

By incorporating CMC in foreign language classrooms, instructors may be helping to meet the goals of the National Standards for Foreign Language Learning (ACTFL, *et al,* 1999). Learners develop some kind of linguistic awareness in both their native and target languages (Blake, 2000, Roche-Dolan, 1999), which addresses the "Contrast" goal. Also, using CMC helps to extend students' roles as classroom learners into a wider perspective as world communicators (González-Bueno, 1998), which addresses the "Communities goal." Furthermore, instructors who incorporate CMC into their teaching are satisfying the following National Educational Technology Standards for Teachers (ISTE 2000b):

1. Teachers plan and design effective learning environments and experiences supported by technology.
2. Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning.
3. Teachers use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning. (p. 9)

The First Study (2000)

The use of CMC in language learning is a rapidly expanding field of study. However, previous studies have commonly focused on the analysis of discourse and content-oriented components of writing proficiency. Fewer have looked at the development of more formal components, such as grammatical and lexical accuracy. This report describes a follow-up experiment to one such type of study.

González-Bueno and Pérez (2000) observed the effects of dialogue journaling through electronic mail on foreign language writing compared with the paper-and-pencil version of the same technique (see González-Bueno (1998) and González-Bueno and Pérez (2000) for a more complete literature review on electronic dialogue journals). Students in both experimental and

control groups wrote a message to their instructor every week on any topic of their choice. Those in the experimental group transmitted their messages via electronic mail. The control group members wrote theirs during class time (approximately 10 minutes at the end of each session.) The investigators collected the data during one semester. There were nine messages from each participant. González-Bueno and Pérez used a modified adaptation of the Essay Correction Code (ECCO) by Lalande (1982) to analyze the data. They analyzed the quantity and accuracy of discourse generated via the electronic and traditional (i.e., paper and pencil) medium. The results showed that the electronic version of dialogue journals had a significantly positive effect on the amount of language generated by the students. However, the electronic version of dialogue journals did not seem to offer any significant advantage over the paper-and-pencil version in regard to lexical and grammatical accuracy. The authors concluded that in order to improve lexical and grammatical accuracy, more form-focused writing activities might be necessary.

Some problems in the design of this study may have affected the results. Recommendations González-Bueno and Pérez offered included a replication of the experiment be carried out over more than one semester, in order to make the study more longitudinal, and that the time constraints be eliminated from the control group by making the dialogue journal an out-of-class assignment. The current study addressed these two limitations. Moreover, the authors felt that the tool for analysis González-Bueno and Pérez (2000) employed was too comprehensive and captured grammatical errors that learners could not have avoided, in view of their limited proficiency. Focusing on fewer, more common grammatical errors presumably would provide a more accurate picture of the effectiveness of the technique.

The Present Study

The present study differed from that of González-Bueno and Pérez (2000) in the following respects: 1) data were acquired over two semesters, 2) time constraints were

eliminated from the control group by making the dialogue journal an out-of-class assignment, 3) the target grammar of the analysis was limited to subject-verb agreement, noun-adjective agreement, and the expression of possession with "de." These were the most common errors in the original study. Concentrating only on these three aspects of Spanish grammar ostensibly would facilitate detection of improvement that might have gone unnoticed in the first study. The setting for the present study was a small university in the Midwest, whereas that by González-Bueno and Pérez (2000) took place in a community college, also in the Midwest.

Research Questions

- What is the overall effect of using electronic mail in the quantity and accuracy of Spanish written language generated by the experimental group, compared to the control group (i.e., between groups)?
- What is the overall effect of using electronic mail versus paper and pencil in the quantity and accuracy of Spanish written language generated by both the experimental and control groups, when comparing the first message to the last (18th) message (i.e., within groups), over a period of two semesters?

Design

Fourteen students from two Spanish classes at a small American University in the Midwest served as participants in this study. One class was the control group and the other class was the experimental group. These participants were in Spanish I during the first semester and in Spanish II during the second semester. The authors analyzed the data for Spanish I students who continued on to Spanish II. Students who did not take Spanish II during the second semester were excluded. First semester control group participants continued in the control group during the second semester. The same procedure was followed with those in the experimental group.

That circumstance caused a considerable reduction in sample size from 30 to 14, which forced us to consider the experiment a pilot study. The participants were 5 males and 9 females whose age ranged from 19 to 25. Seven were in the control group (paper-and-pencil), and the other seven represented the experimental group (e-mail).

The experiment consisted of using dialogue journals as weekly assignments via paper-and-pencil in the control group and e-mail in the experimental group. Students in both groups wrote messages outside class, which provided virtually unlimited time to complete assignments for both groups. They could consult their textbooks, dictionaries, more advanced students, a native speaker, or their instructor as information sources. The instructor of both groups, who was one of the researchers, responded each message weekly by making comments on content rather than on form, making the task a two-way communication activity. There was no overt grammar correction. The instructor, by providing comprehensible input as she responded her students' messages, offered covert correction in the form of paraphrasing. The independent variable for this study was the use of e-mail dialogue journals versus a paper-and-paper technique, and the dependent variables were grammatical and lexical accuracy, as well as number of words per message.

As with the study by González-Bueno and Pérez (2000), both the experimental and control groups completed a questionnaire requesting their opinions concerning the effectiveness of, and attitude toward the journaling technique (e-mail and paper-and-pencil) and the language they were studying.

Data Collection

Each participant produced 18 messages during two consecutive semesters. Messages analysis included counting the number of words per message, as well as the number of lexical and grammatical errors. To analyze the lexicon, the authors took into consideration the vocabulary the chapters in the textbook covered up to the date of the message. Errors in

vocabulary for which participants had no exposure were not considered. Second, to analyze grammar, the authors counted the number of errors in subject-verb and noun-adjective agreement, as well as the misuse of the possessive "de." Similarly to the procedure for lexical errors, errors in grammar about which participants lacked knowledge prior to the date of the message were not considered.

The researchers analyzed messages from both groups and then compared their results. They estimated reliability according to formula developed by Holsti (1969):

$$\frac{2(M)}{N1+N2}$$

where:

M= number of coding decisions on which there was agreement
N1= total number of coding decisions by rater 1
N2= total number of coding decisions by rater 2

The estimate of the reliability of the raters of the study was .90.

Qualitative Analysis

The participants in both groups completed a written survey concerning the effectiveness of, and attitude toward the journaling technique (e-mail vs. paper-and-pencil) and the language they were studying. Both groups had the opportunity to use their counterpart version of the technique for a period of two weeks to observe a different method of dialogue journaling. In short, the e-mail group used the paper-and-pencil method for two weeks, and the paper-and-pencil group used e-mail for two weeks. Messages generated during those two weeks were not included in the analysis. The procedure simply enabled both the experimental (e-mail) and the control (paper-and-pencil) groups to explore the advantages and disadvantages of each

technique. Survey answers were categorized and analyzed by tallying the number of answers. Subjects answered the following questions:

1. Do you think it has helped you with your language learning? If yes, how? If not, why?
2. On a scale from 1-5, rank the amount of improvement, if any, you have experienced in the following aspects: grammar, vocabulary, and language productivity.
3. What strategies have you used to accomplish the task of writing your weekly assignment?
4. Has your attitude towards the language changed? How?
5. You have had the opportunity to do this assignment through two modalities: e-mail and paper-and-pencil. Do you see any advantages of one modality over the other? Explain.
6. What specific aspects of this assignment (dialogue journal) did you like the most?
7. Is there any aspect of this assignment you didn't like?
8. Where did you usually write your messages?
9. What time of the day did you usually write your messages?
   (In the morning, at night,...)

Results

An SPSS statistical test involving the 18 messages generated for each dependant variable was computed for data collected from the subjects in the experimental group and the control group. For research question 1 (What is the overall effect of using electronic mail in the quantity and accuracy of Spanish written language generated by the experimental group, compared to the control group (i.e., between groups)?), the analysis yielded the following results:
With regard to quantity (the number of words per message), the differences between the groups were not statistically significant. With regard to accuracy (the number of grammatical and lexical errors), the differences between the groups were again not statistically significant.

For research question 2 (What is the overall effect of using electronic mail versus paper and pencil in the quantity and accuracy of Spanish written language generated by both the

experimental and control groups, while comparing the first message versus the last (18th) message (i.e., within groups), over the period of two semesters?), the difference was statistically significant for the dependent variable "number of words" in both groups. Both groups used more words in constructing message 18 than message 1 (see Table 1).

Table 1
Number of words: first message versus last message

Group	DF	Error DF	SS	MS	F	P
Exp.	2	11	149169.5	82676.8	65.6	.00*
vs. Control						
* $p < .05$, significant difference						

On the other hand, the results indicate that the differences were not statistically significant for the dependent variables "grammatical errors" and "lexical errors."

Survey

As in the first study, a questionnaire was administered to support the quantitative data and offer a more accurate description of the students' learning experience than if only quantitative data had been analyzed. This survey yielded the following results:

Responses to the 9 questions were categorized as follows:

Table 2
1. What specific aspects of this assignment (dialogue journal) did you like the most?

Interesting aspect	Paper-and-pencil (%)	E-Mail (%)
Additional practice	0.14	0.14
Communication	0.28	0.14

Creativity	0.28	0.14
Fun	0.14	0
Increased input	0	0.14
Knowledge awareness	0.14	0.14
Low anxiety	0.28	0
New vocab. learning	0.57	0.28
Grammar	0.14	0.14
Personalization/Meaningful	0.28	0.43
Self-monitoring	0.14	0.14
Technology	0	0.28

Table 3

2. Is there any aspect of this assignment you didn't like?

Aspect	P'n'p	E-mail
Lack of direct correction	28%	43%
Too open	28%	28%
Technological problems	0%	14%
Absence of diacritics	0%	14%

Table 4

3.Do you think it has helped you with your language learning? If yes, how?

P'n'p	%
Yes	85

How?	
new vocab	43
creativity and meaningfulness	14
additional practice and new vocab	28
knowledge awareness and self-monitoring	14
communication	14
if not,why?	
lack of grammar improvement	15
E-mail	%
Yes	100
How?	
new vocab and self-monitoring	28
vocabulary and grammar	43
meaningfulness and creativity	14
additional input containing corrective feedback	14
personalization	28
communication	14

Table 5

4. On a scale from 1-5, rank the amount of improvement, if any, you have experienced in the following aspects:

Improvement	P'n'p means	E-mail means
Grammar	3.57	3.42
Vocabulary	3.85	4.28
Language Productivity	3.43	4.14

Table 6

5. What strategies have you used to accomplish the task of writing your weekly assignment?

Strategies	P 'n' p	E-mail
Consult textbook	86%	100%
Consult dictionary	71%	100%
Consult a native speaker	14%	0%
Consult a more advanced student	14%	28%
Other(s): Consult teacher and/or Translate from Eng.	28%	28%

Table 7
6. *Has your attitude towards the language changed? How?*

Attitude	P'n'p	E-mail
Stayed the same	43%	14%
Improved	43%	86%
Worsened	14%	0%

Table 8
7. You have had the opportunity to do this assignment through two modalities: e-mail and paper-and-pencil. Do you see any advantages of one modality over the other? Explain.

Modality	Neither	Preferred	Preferred	
Paper	No	P'n'p	E-mail	Reasons
		0%	58%	technology & com.
	28%			
		14%	0%	diacritics
E-mail		0%	28%	technology (time saving)
		0%	28%	fun
		0%	14%	self-monitoring
		14%	0%	no reasons
		14%	0%	_ diacritics
	14%			

Table 9
8. Where did you usually write your messages?

Where?	P'n'p	E-mail
At home	100%	71%
At school	14%	14%
At work	14%	43%

Table 10
9. What time of the day did you usually write your messages? (In the morning, at night,...)

When?	P'n'p	E-mail
Morning	43%	28%
Afternoons	0%	28%
Evenings	14%	28%
Night	71%	43%

Note: two subjects --one from each group— did a re-write of the message at a later time

See Appendix A for students' response excerpts.

Discussion

Quantitative Results

The quantitative analysis showed that the experimental group did not outperform the control group significantly for any of the dependent variables: number of words, or number of

grammatical and lexicon errors. Although non-generalizable, the observed trends might at least give us an indication of the type of effects caused by the different treatment (i.e., electronic mail versus paper-and-pencil.)

By comparing the first versus the last message of the study (within groups), both groups significantly increased the amount of language productivity. This fact shows a great contrast with the first study, where neither group increased the amount of language produced at the end of the study. On the other hand, in the first study, when comparing both groups (between groups), the electronic treatment proved to be more beneficial than its paper-and-pencil counterpart only in the quantity of language produced: the experimental group produced more words than the control group in a significant way. This lack of improvement of the control group was attributed to the time limitation. The elimination of this constraint in the second study yielded the expected results. Both groups did increase the number of words produced at the significant level.

With regard to grammatical accuracy, if we take into consideration that students in both groups wrote much longer paragraphs at the end of the year (80 words on the first message versus 200 words on the last message, averages of the total of experimental and control subjects), the experimental group showed a comparatively greater improvement between the first and last message: In spite of having doubled the number of words towards the end of the study, the experimental group increased its mean score for the number of grammatical errors in only 2 errors. On the other hand, the control group, having increased the number of words no more than the experimental group, obtained a mean of 16 additional grammatical errors on the last message.

Although none of the groups in either study showed a significant improvement in accuracy, by comparing the above results with those obtained in the first study, the following differences can be observed. In the first study, the experimental group tended to improve lexical accuracy, while the control group tended to improve grammatical accuracy. However, in the second study, it was the experimental group the one that showed a tendency to improve grammatical accuracy, while neither group improved vocabulary. Blake's (2000) claim supports

the first study's results. He affirms that frequent incidental lexical negotiations, in contrast to the paucity of syntactic negotiations, might stimulate vocabulary development, whereas leaving "unanswered or unsatisfactorily addressed the issue of grammatical development" (p.120). Along the same lines, Kern (1998) affirms that "computers are now most often used as a medium for quick, casual communication, in which formal accuracy is of secondary importance" (p. 83). On the other hand, Salaberry's (2000) argument supports the present study when he argues that the functional communication constraints (i.e., reduced means of expression) represented in email communication may force learners to focus on the morphological features of L2 grammars more than they would in other communication settings, such as face-to-face contacts (p. 32). This situation leaves our research questions unanswered.

Qualitative Results

According to the qualitative analysis, the majority of the experimental students believed the assignment had improved their attitude towards the language, and half of them felt that the e-mail journal had some advantages over its paper-and-pencil counterpart. These advantages were learning to communicate, self-monitoring and using technology appropriately, in addition to finding the assignment fun. Almost half of the group thought the assignment was meaningful and personalized, but only twenty-eight percent affirmed they had improved their grammar and vocabulary. Lastly, a small percentage asserted that the e-mail journaling technique was communicative, creative, self-monitoring, improved grammar, produced additional practice, and increased input and knowledge awareness (see Tables 2, 4, and 8). In addition, when these subjects ranked the amount of improvement they had acquired with this task, they thought they had improved first, in vocabulary, followed by language productivity, and grammar, in that order (see Table 5).

On the other hand, only one third of the control subjects asserted that this practice was communicative, creative, meaningful and one that produced low anxiety (see Table 2). Only a small percentage thought this paper-and pencil journaling activity was fun, self-monitoring, provided additional practice and knowledge awareness. A small percentage also thought that the task helped to improve their grammar, while more than half believed they had learned new vocabulary (see Table 4). This group ranked their learning improvement in the following order: vocabulary, grammar, and language productivity (see Table 5).

With regard to negative responses, more experimental than control subjects thought that they would have preferred to see their errors graded. A few from both groups commented that the exercise was too open and that sometimes they could not think of what topic to write about. Because of the very nature of the electronic medium, some students in the experimental group did not like the uncertainty of not knowing whether the e-mail message had been received or not until the instructor responded. Also, since newer software that facilitates the use of diacritics was not available (LeLoup & Ponterio, 1998), the fact of not being able to use proper punctuation and accent marks on the e-mail message created additional uneasiness.

With regard to settings, the experimental group used different settings (home, school, work) while the control group did their assignment mostly at home (see Table 9). With regard to the time of the day, the experimental group did the assignment at diverse times of the day, while the control group did it mostly in the mornings or at night (see Table 10). In spite of having eliminated the time and place constraints in the control group by making the activity an out-of-class assignment, the technology-based medium provided more diversified settings to use the language than their paper-and-pencil counterpart. This might have motivated the experimental subjects to increase language productivity.

Both groups had the opportunity of using electronic mail and paper-and-pencil during the year. Consequently, both groups coincided in observing the advantages of electronic mail over paper-and-pencil. It was found that both groups preferred the e-mail technique to the paper-and-pencil, regardless of the technique used over the duration of the experiment. The reasons alleged

for this preference were technology, communication, timesaving, self-monitoring, and fun, although some individuals resented the lack of diacritics in the electronic medium (see Table 8).

The instructor of both groups (and one of the researchers) believes that both groups were dedicated and that they enjoyed the assignment. However, the instructor's impression was that the electronic mail students felt more enthusiasm toward this up-to-date task (easy to erase, automatic word count, and immediate communication).

Limitations of the Study

The limitations found in the first study (a short term and time limitation for the control group) were eliminated in this second study. This elimination resulted in an increase of productivity in the control group. Nevertheless, there was a tendency in the experimental group to produce a larger number of words, thus rendering e-mail as a more productive tool. However, by limiting our population to only those students who remained as participants during the second semester, the size of the sample was considerably reduced, therefore rendering the results only preliminary. Consequently, significance could be found if replicated with larger samples.

Conclusions

This study explored the significance of the overall effect of using electronic mail in the quantity and accuracy of Spanish written language generated by the electronic media through dialogue journals, compared to the paper-and-pencil version of the technique. The study also compared the first message versus the last (18th) message (i.e., within groups), over the period of two semesters.

In an effort to establish clear differences between the two modalities (paper-and-pencil and e-mail), the authors revisited previous studies. They replicated the experiment trying to eliminate limitations that might have been responsible for previous lack of conclusiveness in the

results. However, no significant differences between the two media were found in the second study. Perhaps the answers to our research questions require further replica, and further elimination of the seemingly ever-present limitations.

Based on the present study, the following tentative conclusions can be drawn:

1. No significant differences were found between-groups regarding any of the variables: amount of words, and number of grammar and lexicon errors.
2. By comparing the first versus the last message of this study (within-groups), both groups significantly increased the amount of language productivity. The elimination of time constraints in the second study yielded the expected results. Both groups increased the number of words produced at the significant level.
3. With regard to qualitative results, the experimental group seemed to be more pleased with the technique (e-mail) than the control group (paper-and-pencil). The control group thought the e-mail technique had several advantages over paper-and-pencil. Those advantages were the opportunity to use technology, enhanced communication, timesaving, self-monitoring, and fun.
4. By comparing the first study to the present study, the authors observed that in the first study, the experimental group tended to improve lexical accuracy whereas the control group tended to improve grammatical accuracy. In the present study, only the experimental group improved grammatical accuracy, while neither group improved vocabulary. Therefore, we cannot conclude that either technique (e-mail versus paper-and-pencil) seems to be more beneficial than the other in terms of accuracy. As for productivity, once the authors eliminated the time constraint factor from the control group, no significant differences were found between groups.
5. Dialogue journaling in foreign language writing works especially well with students who are bashful to speak up in the classroom. Students are able to tell their instructor about their likes, dislikes, concerns, and about their personal life in general. Just as important, better

rapport is developed with this technique. As suggested by this study, the benefits of dialogue journals are enhanced when done as an out-of-class activity.

Recommendations

Our first recommendation is to replicate this study with larger samples in order to generalize results. We hope that foreign language instructors are not discouraged from using e-mail in their classrooms in view of this pilot study's non-significant results. As suggested by other studies, e-mail offers obvious advantages in terms of convenience, flexibility, and time management (González-Bueno, 1998; Roche-Dolan, 1999; St. John & Cash, 1995; Wang, 1994). E-mail still provides numerous advantages over paper-and-pencil techniques. However, in order to observe any significant advantages of the electronic media over the more traditional paper-and-pencil means, we have to look at more discourse-oriented features of the writing process. With regard to formal aspects of the writing process, according to the results of this study, e-mail does not seem to provide any significant advantages to the writing task. Consequently, we reiterate the first study's recommendation to use form-focused writing activities in order to improve lexical and grammatical accuracy.

Finally, it is recommended the use of newer e-mail software that allows the use of diacritics. Because many languages contain diacritics, or even use a different alphabet, this kind of software is essential in the implementation of email activities in the foreign language classroom.

References

ACTFL, AATF, AATG, AATI, AATSP, ACL, ACTR, CLASES/CLTA, and NCJLT/ATJ. (1999). *Standards for Foreign Language Learning in the 21st Century.* Allen Press Inc.: Lawrence, KS.

Beauvois, Margaret (1996). Computer Mediated Communication (CMC): A link to improve communication and oral skills in second language learning, 165-184, in Michael Bush (Ed.) Technology-Enhanced Language Learning. *The ACTFL Volumen on Technology.* Lincolnwood: Il: National Textbook.

Beauvois, Margaret (1998). Write to speak: the effects of electronic communication on the oral achievement of fourth semester French students, 165-183. in Judith A. Muykens (Ed.) *New Ways of Learning and Teaching: Focus on Technology and Foreign Language Education.* Boston, MA: Heinle & Heinle Publishers.

Blake, Robert (2000). Computer mediated communication: A window on L2 Spanish interlanguage. *Language Learning & Technology 4,* 1

González-Bueno, Manuela (1998). The Effect of Electronic Mail on Spanish L2 Discourse. *Language Learning and Technology, 1, 2.*

_____and Luisa Pérez (2000). Electronic Mail in Foreign Language Writing: A Study of Grammatical and Lexical Accuracy, and Quantity of Language. *Foreign Language Annals, 33,* 2: 189-198.

International Society for Technology in Education (2000). *National Educational Technology Standards for Students: Connecting Curriculum and Technology.* Eugene, OR. ISTE and USDE.

_____ (2000). *National Educational Technology Standards for Teachers.* Eugene, OR: ISTE NETS Projects.

Kern, Richard (1998). Technology, Social Interaction, and FL Literacy, 57-92, in Judith A. Muykens (Ed.) *New Ways of Learning and Teaching: Focus on Technology and Foreign Language Education*. Boston, MA: Heinle & Heinle Publishers.

Lalande, J. F. (1982). Reducing Composition Errors: An Experiment. *Modern Language Journal*, 66, 140-49.

LeLoup, Jean W. and Robert Ponterio (1998). Using the Internet for foreign language learning. *ERIC Review, 6*, 1: 60-62.

Roche-Dolan, María (1999). *Las cinco ces con el correo electrónico.* Paper presented at the 33rd Annual Meeting of ACTFL (Boston, MA)

Salaberry, Rafael M. (2000). Pedagogical design of computer mediated communication tasks: Learning objectives and technological capabilities. *Modern Language Journal, 84*, i: 28-37.

St. John, E., and D. Cash (1995). Language learning via e-mail: Demonstrable success with German, 191-197 in M. Warschauer, ed., *Virtual Connections: Online Activities and Projects for Networking Language Learners.* Honolulu, HI: University of Hawaii, Second Language Teaching & Curriculum Center.

Van Handle, Donna C. and Kathryn A. Corl (1998). Extending the dialogue: using electronic mail and the Internet to promote conversation and writing in intermediate level German language courses. *CALICO Journal, 15*, 1-3: 129-142.

Wang, Y.M. (1994). E-Mail dialogue journaling in an ESL reading and writing classroom (Doctoral Dissertation, University of Oregon, 1993). *Dissertation Abstracts International*, 54, 3316.

Appendix A

Students' Responses Excerpts

P'n'p:

"It gave a chance to learn new words"

"When you do assignments out the book, the sentences and what you need to write are already there, but this makes you come up with it on your own."

"It was a challenge to use new words and to practice the vocabulary I knew."

"I did not like not having feedback on mistakes I was making. I'd rather learn from my mistakes."

"Paper-and-pencil works best, I think. It makes you practice and learn accent marks and tildes."

"I liked that it was not graded for grammar. This made it non-stressful and more fun. Without worrying about actual constructions, I was free to write anything, and experiment."

"Sometimes it didn't seem like I was getting any better. I had no basis to tell if my messages were becoming more coherent or what I needed to work on."

"I liked that it made me figure out which words and forms of words I had to use in order to talk about my subject. It made me put everything I had learned together."

"It was a way a way of building a student/teacher relationship. Able to speak freely and learn at the same time."

"The weeks that I did it on e-mail, the assignment seemed a little less difficult. Writing is harder than typing."

"The e-mail seemed a little bit more direct, and easier to follow."

E-mail:

"…[e-mail] personalizes my learning and I can apply Spanish to my life by writing these entries about what's going on, etc., in the Spanish language."

"… [the assignment] was a valuable part of the learning experience for this class."

"This is a very good exercise for the class to continue doing."

"By writing about my everyday experiences, I learned the type of vocabulary that I use most often in communication. This gives each student a sort of individual lesson."

"I wish that there was a more detailed correction of grammar."

"I learned new vocabulary that we didn't covered in class, and the casual tones made use everything we learned in class previously."

"Since Spanish is not my first language, it was helpful to be able to revise and proofread my compositions on the computer, without having to erase mistakes. Also, the number of words is counted automatically by the computer."

"Since accent marks and other Spanish-only symbols cannot be sent vial e-mail, I was not forced to learn exactly which letters were accented in words."

"It forced me to learn words and phrases associated with my life and daily activities, as well as forcing me to write extended compositions, as opposed to short sentences."

"I have an increased respect for the language and its speakers. Spanish is a beautiful language, and I hope to have the opportunity to learn more of it later."

"I preferred e-mailing because it took less time (the hand-written message had to be recopied to make it neat.) Also, writing in a foreign language is difficult, and if one's handwriting is less than perfect, the professor may miss errors made by the student because the work is unreadable. I suggest using e-mail assignments in the future."

"The assignment really meant something to me. It wasn't just an exercise, out of the book."

"We could write about anything, and it was nice that the teacher actually took the time to respond to each student. It really helped me with different aspects of Spanish, especially vocab."

"There were so many things that could go wrong (server down, e-mail didn't get there), but the teacher understood these problems and was willing to work with the students."

"Doing the journal e-mail encouraged me to write as I would normally speak."

"I enjoy Spanish more now. I can understand more as I hear native speakers."

"I liked being able to write about my interests, etc., in Spanish because it gave a sort of real-life experience, it you will, outside of the classroom."